

ExC

## IUBMB Enzyme Nomenclature

**EC 4.1.1.5****Accepted name:** acetolactate decarboxylase**Reaction:** (*S*)-2-hydroxy-2-methyl-3-oxobutanoate = (*R*)-2-acetoin + CO<sub>2</sub>**Other name(s):**  $\alpha$ -acetolactate decarboxylase; (*S*)-2-hydroxy-2-methyl-3-oxobutanoate carboxy-lyase**Systematic name:** (*S*)-2-hydroxy-2-methyl-3-oxobutanoate carboxy-lyase [(*R*)-2-acetoin-forming]**Links to other databases:** [BRENDA](#), [EXPASY](#), [KEGG](#), [ERGO](#), CAS registry number: 9025-02-9**References:**

1. Hill, R.K., Sawada, S. and Arfin, S.M. Stereochemistry of valine and isoleucine biosynthesis. IV. Synthesis, configuration, and enzymatic specificity of  $\alpha$ -acetolactate and  $\alpha$ -aceto- $\alpha$ -hydroxybutyrate. *Bioorg. Chem.* 8 (1979) 175-189.
2. Størmer, F.C. Isolation of crystalline pH 6 acetolactate-forming enzyme from *Aerobacter aerogenes*. *J. Biol. Chem.* 242 (1967) 1756-1759. [PMID: [6024768](#)]

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